

On the postlarval stages of the species of *Paralepis*
inhabiting the North Eastern part of the Atlantic
incl. the Mediterranean.

Preliminary note

by

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The material upon which the present survey is based, comes mainly from the cruises of the Danish Research-Steamer "Thor" in the Mediterranean and in the Atlantic Ocean along the distance from Gibraltar to Iceland. Moreover supplementary material has been brought home by various other vessels fishing for the Danish Committee for the Study of the Sea. Through these supplementary collections, mostly made in warmer parts of the Atlantic than those visited by the "Thor", the bulk of the material was considerably increased and several new species were recorded. The study of this second part of the material at hand is, however, not so far advanced that I have been able to include the new species in the present survey.

Key to the Mediterranean species.

1. Pectorals prolonged (longer than head).
Isolated large stellate chromatophores are present at base of unpaired fins. Their position is as follows: 1) one at base of dorsal fin; 2) one at base of anal fin; 3) at end of tail near base of caudal fin there are two of which one is placed above, the other below medio-lateral line.
Anus behind middle of body, even in the smallest stages (abt. 1 cm in length).

Paralepis (Sudis) hyalinus Rafinesque.

II. Pectorals not prolonged.

No isolated large chromatophores at base of unpaired fins. Anus in advance of middle of body both in the smallest stages (abt. 1 cm in length) and, with the exception of *P. speciosus* Bellotti and *P. pseudosphyrænoides* nov. spec., also in the older stages (abt. 2 cm in length).

A. Ventral pigment consisting of a single row of fine points along ventral edge of body between anus and anal fin. The smallest stages in which the anal fin is still wanting exhibit in all 3 or 4 postanal groups of points.

a. Ventral pigment between anus and anal fin consisting of one group situated behind middle of body. The smallest stages (without indication of anal fin as yet), exhibit in all three postanal groups of pigment points. The hindmost group situated near end of tail consisting of three rows, viz. two lateral and one ventral. In the largest stages (3—4 cm in length, in which the row of points mentioned above appears as a nearly unbroken series extending from anus to anal fin) the length of the snout in % of total length is 9—10.

Number of vertebræ 81—84.

P. pseudosphyrænoides nov. spec.

b. Ventral pigment between anus and anal fin consisting of two groups, one behind, the other about at middle of body. The smallest stages (still lacking in anal fin) possess in all four postanal groups of pigment points, of which the hindmost group situated near end of tail consists only of two rows of pigment points, viz. two lateral ones. In the largest stages (3—4 cm in length, in which the row of points mentioned above appears as a nearly unbroken series from anus to anal fin) the length of the snout in % of total length is 5—6.

Number of vertebræ 89—91.

P. sphyrænoides Risso.

B. No ventral pigment between anus and anal fin.

a. Dorsolateral row of small pigment spots present (extending from a little before middle of body to end of tail in

the older stages, their number being 15—20. In the smaller stages (abt. 1 cm in length) only a few pigment spots are present situated at some distance from end of tail. The pigment spots are not superficial and move inwards during development).

α . Length abt. 1 cm: Preanal distance abt. $\frac{2}{5}$, length of snout abt. $\frac{1}{9}$ of total length.

Length abt. 2 cm: Preanal distance abt. $\frac{2}{3}$, length of snout abt. $\frac{1}{7}$ of total length.

Number of vertebræ 67—69.

P. speciosus Bellotti.

β . Length abt. 1 cm: Preanal distance abt. $\frac{1}{4}$, length of snout abt. $\frac{1}{15}$ of total length.

Length abt. 2 cm: Preanal distance abt. $\frac{2}{5}$, length of snout abt. $\frac{1}{10}$ of total length.

Number of vertebræ 70.

P. coregonoides Risso.

b. No dorsolateral row of small pigment spots.

Number of vertebræ 79—82.

P. Rissoi Bonaparte.

Key to the species inhabiting the North Eastern part of the Atlantic.

I. Ventral pigment between anus and anal fin.

P. pseudosphyrænoïdes nov. spec. and
P. sphyrænoïdes Risso.

(as to their distinction see the Key to the Mediterranean species).

II. No ventral pigment between anus and anal fin.

A. Dorsolateral row of small pigment spots present (as to position and number see *P. coregonoides* Risso in Key to the Mediterranean species).

Number of vertebræ 72—73.

P. borealis Reinhardt.

B. No dorsolateral row of small pigment spots.

Number of vertebræ 83—85.

P. Krøyeri Lütken.

P. pseudosphyrænoides nov. spec.

(Not represented by any adult specimen).

D 10, A 28—29 (30), P?, V?, Vert 81—84.

Ventrals placed in advance of dorsal fin.

The following measurements have been taken from one of the larger postlarval specimens of both species.

	<i>P. pseudosphyrænoides.</i>	<i>P. sphyrænoides.</i>
Total length excl. caudal.....	= 36.0 mm	36.0 mm
Length of head	= 6.5 "	4.6 "
Length of snout	= 3.2 "	2.0 "
Height of head =		
Greatest height	= 2.9 "	2.1 "
Smallest height	= 1.2 "	0.9 "
Predorsal distance	= 21.0 "	21.7 "
Preventral "	= 19.0 "	22.0 "
Preanal "	= 21.5 "	19.5 "
Distance from snout to front of anal fin	= 28.5 "	29.0 "
Length of dorsal fin at base	= 1.5 "	1.1 "
Length of anal fin	= 6.1 "	5.9 "

I have proposed the name *P. pseudosphyrænoides* for this species in order to suggest that it is closely related to *P. sphyrænoides* Risso, differing, however, in several features from this species as shown by the above data. The most striking difference lies in the length of the head or more particularly in that of the snout. In *P. pseudosphyrænoides* the length of the snout in % of total length is 9—10, in *P. sphyrænoides* 5—6, this holding good for the older postlarval stages, 3—4 cm in length. Besides, the numbers of vertebræ are different as shown by the following figures.

<i>P. pseudosphyrænoides.</i>		<i>P. sphyrænoides.</i>	
Number of vert.	Number of specimens	Number of vert.	Number of specimens
84	2	91	18
83	14	90	27
82	12	89	8
81	3	Average number of vertebræ	
Average number of vertebræ		= 90.19.	
= 82.48.			

The new species has been met with both in the Mediterranean and in the Atlantic.